CHAPTER 4

PRELIMINARY MARKSMANSHIP INSTRUCTION (Phase I of Basic Rifle Marksmanship)

An infantryman's basic battlefield tool is his weapon. To effectively employ his weapon, marksmanship must be mastered from the basics of rifle marksmanship to the advanced stages of target engagement. This will greatly enhance the infantryman's capability to close with and destroy the enemy.

Understanding the operation and functions of any machine is vital to becoming an expert with that machine. The same theory applies to rifle marksmanship. Commanders must keep this in mind when setting up a training program. This chapter covers the mechanical training of the M16-/M4-series weapons. With this knowledge, a soldier is able to assess and correct any malfunction to keep the weapon always operating properly.

Section I. INTRODUCTION TO BASIC RIFLE MARKSMANSHIP AND MECHANICAL TRAINING

This training program (Figure 4-1) introduces the soldiers to BRM and teaches them how to maintain, operate, and correct malfunctions on an M16-/M4-series weapon. It also teaches peer coaching responsibilities and sight manipulation while emphasizing safety.

Introduction to Basic Rifle Marksmanship and Mechanical Training
Period 1 (4 hours)
Instructional Intent:
Introduce the soldiers to BRM and teach them how to maintain, operate and correct malfunctions on a M16-/M4-series weapon. Teach peer coaching responsibilities and sight manipulation while emphasizing safety.
Observables:
Soldiers can disassemble and assemble their weapon (refer to TM 9-1005-319-10).
Soldiers can identify all components of their weapon (refer to TM 9-1005-319-10).
Soldiers can maintain, load and unload their magazines (refer to TM 9-1005-319-10).
Soldiers can maintain, load, unload and clear their weapons (refer to TM 9-1005-319-10).
Soldiers can handle and identify 5.56-mm ammunition (refer to TM 9-1005-319-10).
Soldiers can perform SPORTS on their weapon within five seconds (refer to TM 9-1005-319-10).
Soldiers understand the eight cycles of function and can troubleshoot their weapon IAW this manual.
Soldiers can perform a function check on their weapon (refer to TM 9-1005-319-10).
Soldiers can correctly manipulate their sights without assistance (refer to TM 9-1005-319-10).
Soldiers are emphasizing safety through out training (refer to TM 9-1005-319-10).
Soldiers are taught peer coaching techniques and responsibilities IAW this manual.

Notes: 1. Care must be taken in teaching immediate action (SPORTS) to clear a weapon stoppage. This technique must not be confused with the procedure for correctly loading a magazine into the weapon due to the position of the bolt.
2. Soldiers who do not meet the standard will receive remedial training before subsequent instruction.

Figure 4-1. Introduction to basic rifle marksmanship and mechanical training.

4-1. CLEARING

This paragraph explains the techniques and procedures for clearing the M16-/M4-series weapon (Figure 4-2). Additional mechanical training is available in TM 9-1005-319-10 to include disassembly, maintenance, assembly, loading, and sight manipulation.

WARNING

To be considered SAFE before disassembly, cleaning, inspecting, transporting, or storing, the weapon must be cleared.

a. Point in a SAFE DIRECTION! Place selector lever on SAFE. If weapon is not cocked, lever cannot be pointed toward SAFE.

b. Remove the magazine by depressing the magazine catch button and pulling the magazine down.

c. To lock bolt open, pull charging handle rearward. Press bottom of bolt catch and allow bolt to move forward until it engages bolt catch. Return charging handle to full forward position. If you haven't before, place selector lever on SAFE.

d. Check receiver and chamber to ensure these areas contain no ammo.

e. With selector lever pointing toward SAFE, allow bolt to go forward by pressing upper portion of bolt catch.

NOTE: If the rifle will not be fired immediately close the ejection port cover.

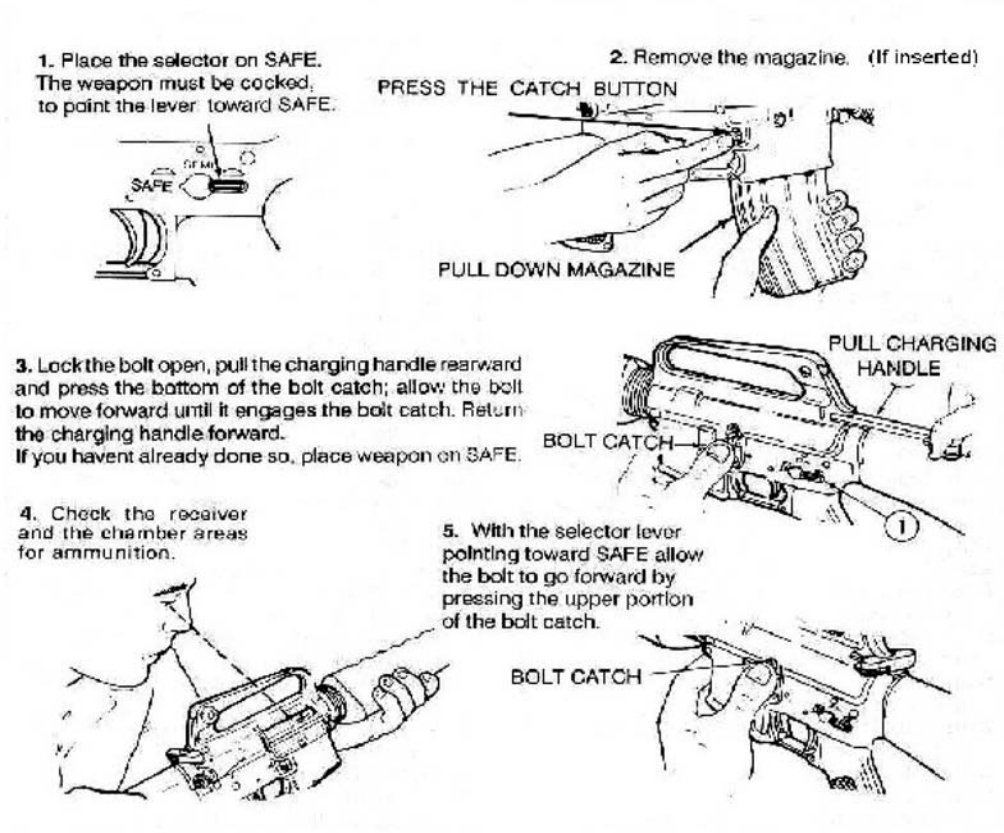


Figure 4-2. Clearing.

4-2. CYCLES OF FUNCTIONING

The soldier must understand the rifle components and the mechanical sequence of events during the firing cycle. The eight cycles of functioning (feeding, chambering, locking, firing, unlocking, extracting, ejecting, and cocking) begin after the loaded magazine has been inserted in the weapon.

a. **Feeding** (Figure 4-3, page 4-4). As the bolt carrier group moves rearward, it engages the buffer assembly and compresses the action spring into the lower receiver extension. When the bolt carrier group clears the top of the magazine, the expansion of the magazine spring forces the follower and a new round up into the path of the forward movement of the bolt. The expansion of the action spring sends the buffer assembly and bolt carrier group forward with enough force to strip a new round from the magazine.

Figure 4-3. Feeding.

b. **Chambering** (Figure 4-4). As the bolt carrier group continues to move forward, the face of the bolt thrusts the new round into the chamber. At the same time, the extractor claw grips the rim of the cartridge, and the ejector is compressed.

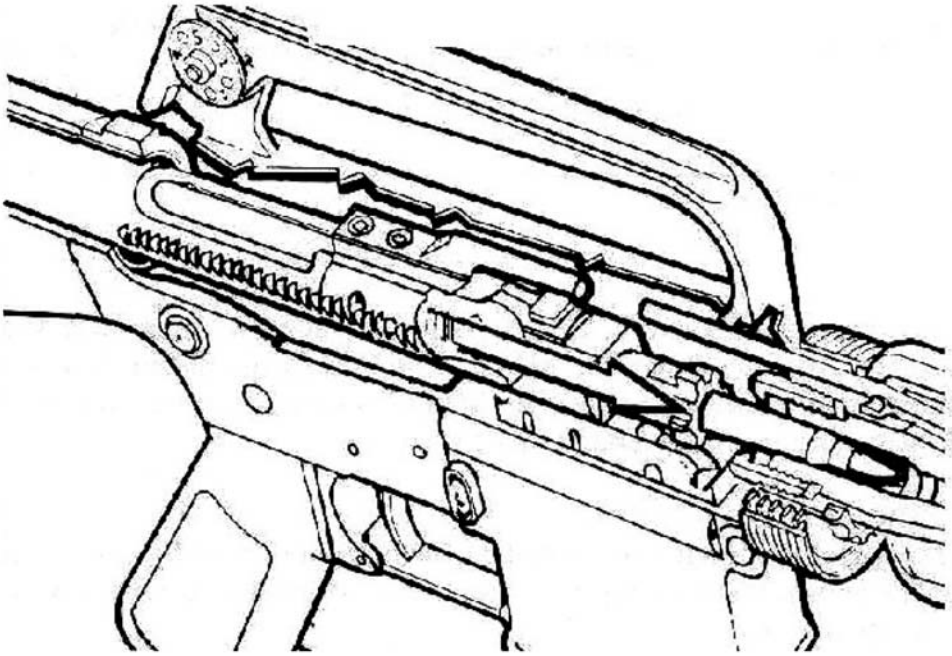


Figure 4-4. Chambering.

c. **Locking** (Figure 4-5). As the bolt carrier group moves forward, the bolt is kept in its most forward position by the bolt cam pin riding in the guide channel in the upper receiver.

Just before the bolt locking lugs make contact with the barrel extension, the bolt cam pin emerges from the guide channel. The pressure exerted by the contact of the bolt locking lugs and barrel extension causes the bolt cam pin to move along the cam track (located in the bolt carrier) in a counterclockwise direction, rotating the bolt locking lugs in line behind the barrel extension locking lugs. The rifle is ready to fire.

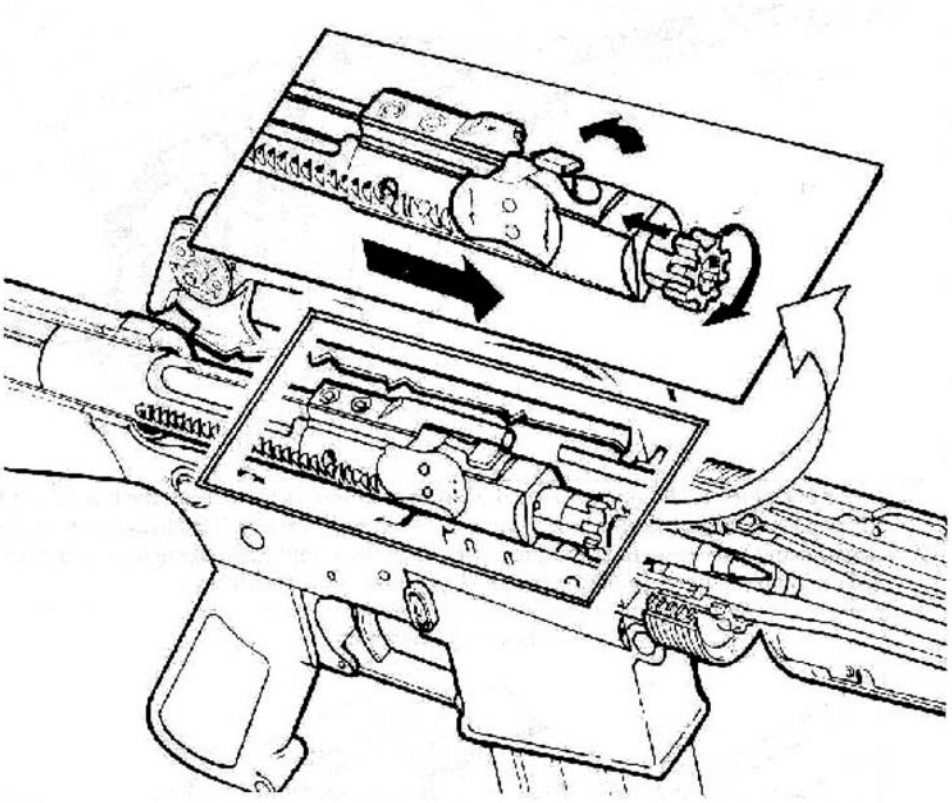


Figure 4-5. Locking.

d. **Firing** (Figure 4-6, page 4-6). With a round in the chamber, the hammer cocked, and the selector on SEMI, the firer squeezes the trigger. The trigger rotates on the trigger pin, depressing the nose of the trigger, and disengaging the notch on the bottom of the hammer. The hammer spring drives the hammer forward. The hammer strikes the head of the firing pin, driving the firing pin through the bolt into the primer of the round. When the primer is struck by the firing pin, it ignites and causes the powder in the cartridge to ignite. The gas generated by the rapid burning of the powder forces the projectile from the cartridge and propels it through the barrel. After the projectile has passed the gas port (located on the upper surface of the barrel under the front sight, Figure 4-5) and before it leaves the barrel, some gas enters the gas port and moves into the gas tube. The gas tube directs the gas into the bolt carrier. It passes through the key downward into a space between the rear of the carrier's bolt cavity and the rear of the bolt itself. The gas then expands. The bolt is locked into the barrel extension and unable to move forward, and the carrier is thus forced to the rear by the expanding gas.

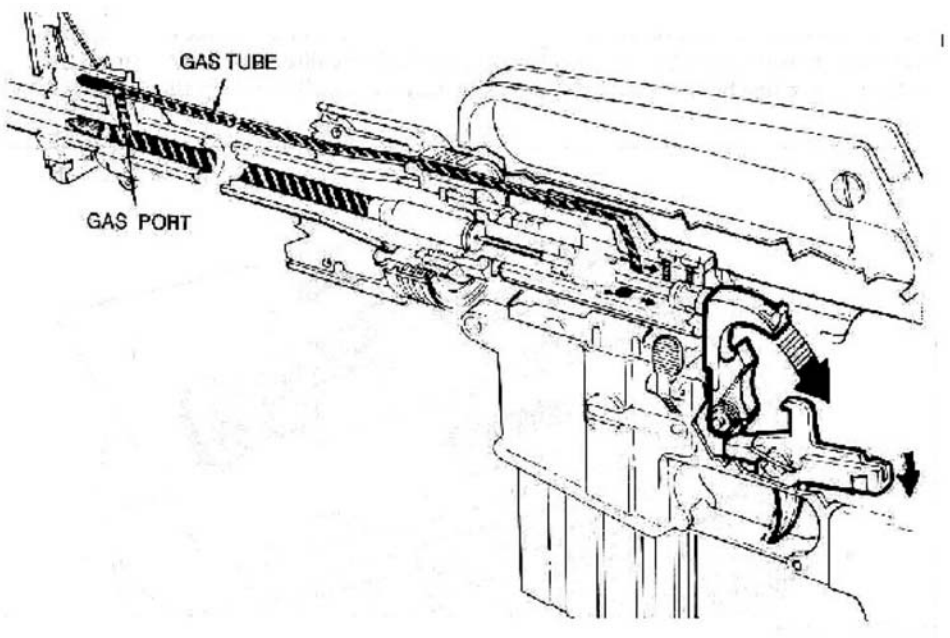


Figure 4-6. Firing.

e. **Unlocking** (Figure 4-7). As the bolt carrier moves to the rear, the bolt cam pin follows the path of the cam track (located in the bolt carrier). This action causes the cam pin and bolt assembly to rotate simultaneously until the locking lugs of the bolt are no longer in line behind the locking lugs of the barrel extension.

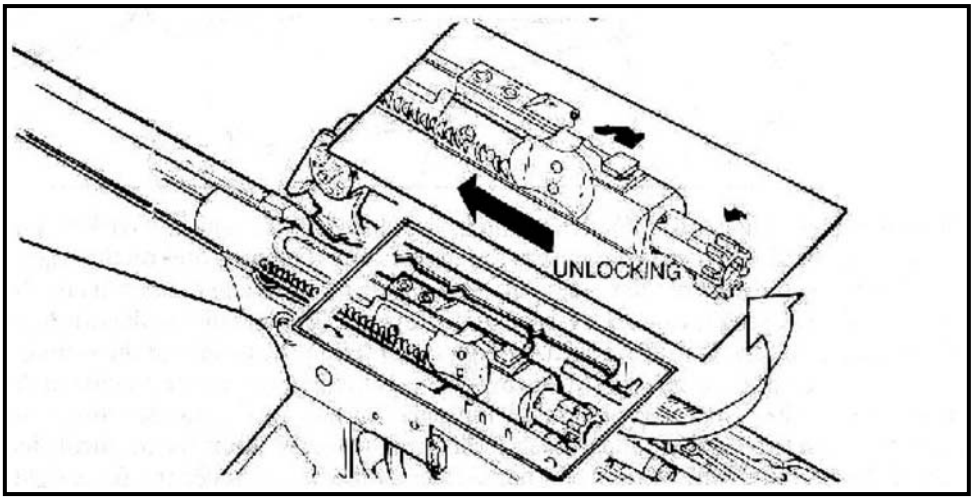


Figure 4-7. Unlocking.

f. **Extracting** (Figure 4-8). The bolt carrier group continues to move to the rear. The extractor (which is attached to the bolt) grips the rim of the cartridge case, holds it firmly against the face of the bolt, and withdraws the cartridge case from the chamber.

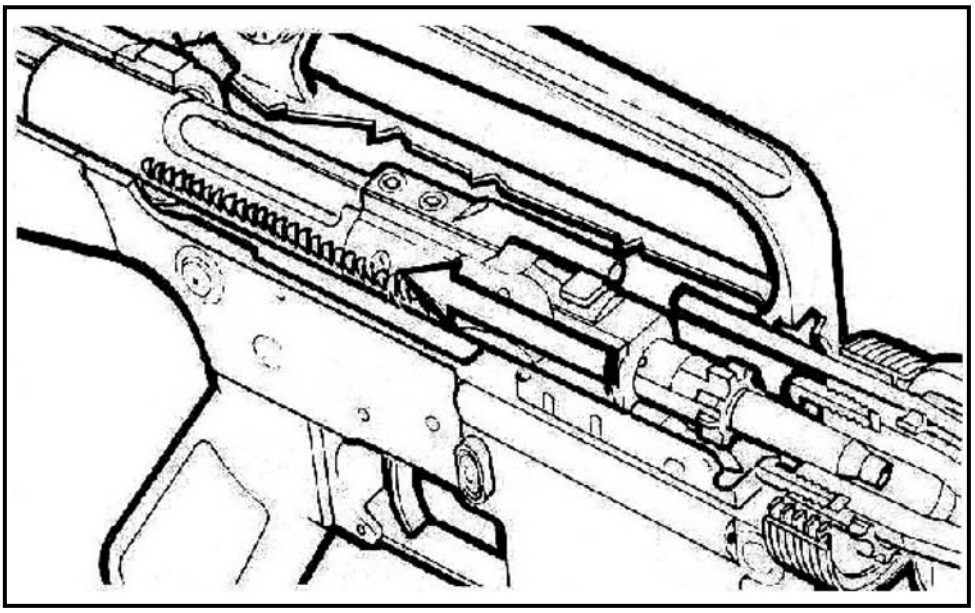


Figure 4-8. Extracting.

g. **Ejecting** (Figure 4-9). With the base of a cartridge case firmly against the face of the bolt, the ejector and ejector spring are compressed into the bolt body. As the rearward movement of the bolt carrier group allows the nose of the cartridge case to clear the front of the ejection port, the cartridge is pushed out by the action of the ejector and spring.

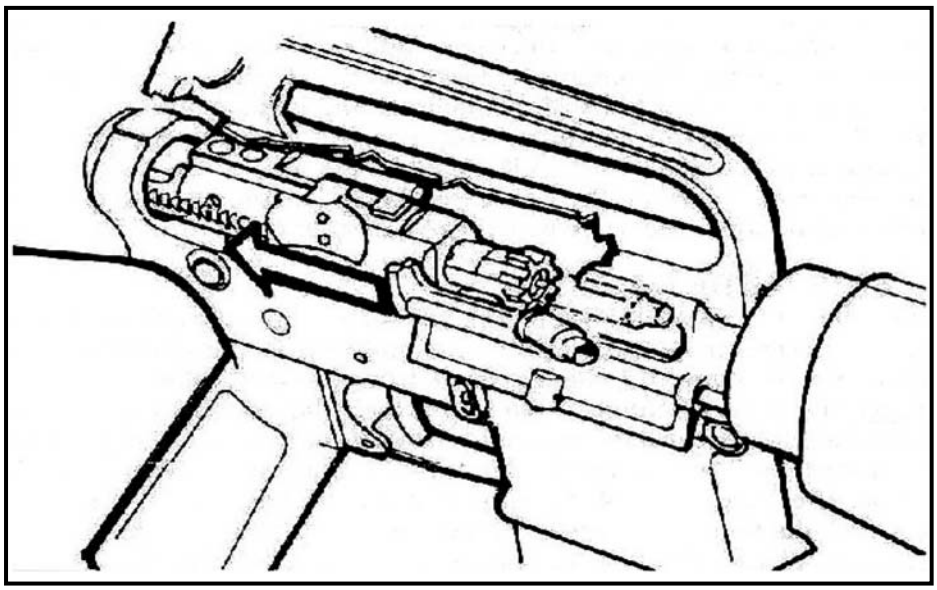


Figure 4-9. Ejecting.

h. **Cocking** (Figure 4-10). The rearward movement of the bolt carrier overrides the hammer, forcing it down into the receiver and compressing the hammer spring, cocking the hammer in the firing position. The action of the rifle is much faster than human reaction; therefore, the firer cannot release the trigger fast enough to prevent multiple firing.

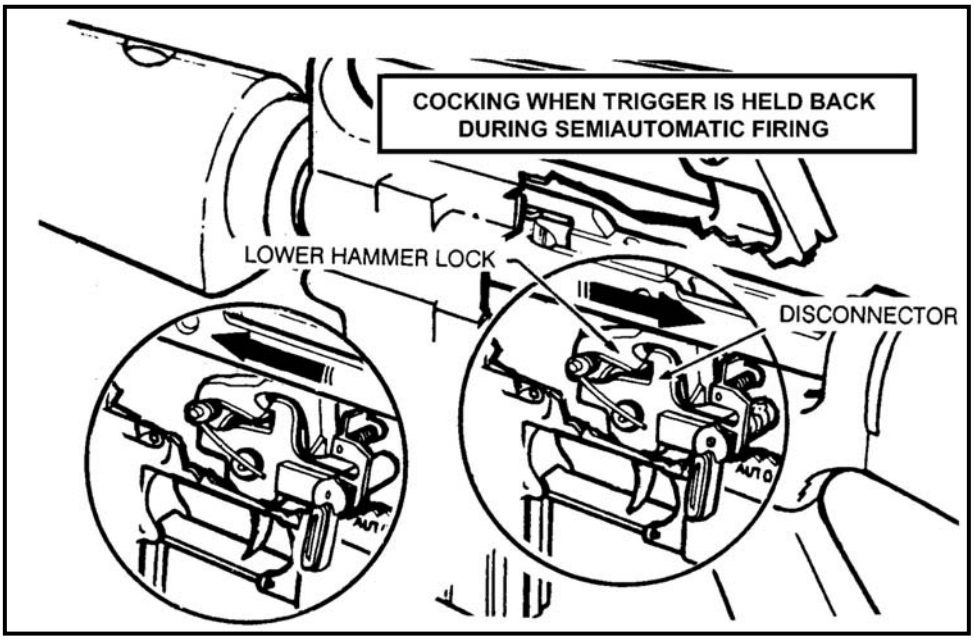


Figure 4-10. Cocking.

4-3. MODES OF FIRE

The M16A3 and M4A1 rifles function in either the semiautomatic or automatic mode. The M16A2, M16A4, and M4 carbine function in either the semiautomatic or three-round burst mode.

a. **Semiautomatic Fire Mode (M16-/M4-series).** The disconnector is a mechanism installed so the firer can fire single rounds. It is attached to the trigger and rotated forward by action of the disconnector spring. When the recoil of the bolt carrier cocks the hammer, the disconnector engages the lower hook of the hammer and holds it until the trigger is released. Then the disconnector rotates to the rear and down, disengaging the hammer and allowing it to rotate forward until caught by the nose of the trigger. This prevents the hammer from following the bolt carrier forward and causing multiple firing. The trigger must be squeezed again before the next round will fire.

b. **Automatic Fire Mode (M16A3 Rifle, M4A1 Carbine Only).** When the selector lever (Figure 4-11) is set on the AUTO position, the rifle continues to fire as long as the trigger is held back and ammunition is in the magazine. The functioning of certain parts of the rifle changes when firing automatically.

(1) Once the trigger is squeezed and the round is fired, the bolt carrier group moves to the rear and the hammer is cocked. The center cam of the selector depresses the rear of the disconnector and prevents the nose of the disconnector from engaging the lower hammer hook. The bottom part of the automatic sear catches the upper hammer hook and holds it until the bolt carrier group moves forward. The bottom part strikes the top of the sear and releases the hammer, causing the rifle to fire automatically.

(2) If the trigger is released, the hammer moves forward and is caught by the nose of the trigger. This ends the automatic cycle of fire until the trigger is squeezed again.

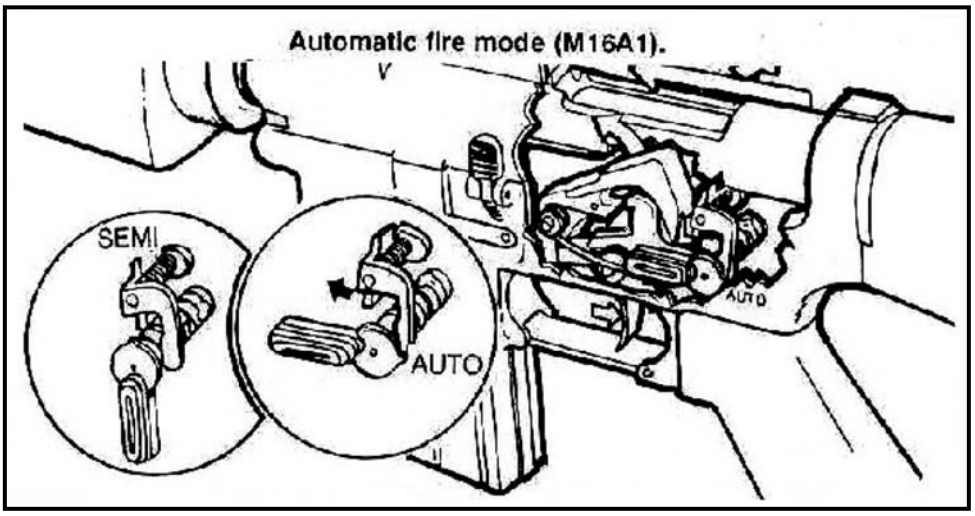


Figure 4-11. Automatic fire mode.

c. **Burst Fire Mode (M16A2/A4 Rifle, M4 Carbine).** When the selector lever is set on the BURST position (Figure 4-12, page 4-10), the rifle fires a three-round burst if the trigger is held to the rear during the complete cycle. The weapon continues to fire three-round bursts with each separate trigger pull as long as ammunition is in the magazine. Releasing the trigger or exhausting ammunition at any point in the three-round cycle interrupts fire, producing one or two shots. Reapplying the trigger only completes the interrupted cycle; it does not begin a new one. This is not a malfunction. The M16A2/4 and M4 disconnectors have a three-cam mechanism that continuously rotates with each firing cycle. Based on the position of the disconnector cam, the first trigger pull (after initial selection of the BURST position) can produce one, two, or three firing cycles before the trigger must be pulled again. The burst cam rotates until it reaches the stop notch.

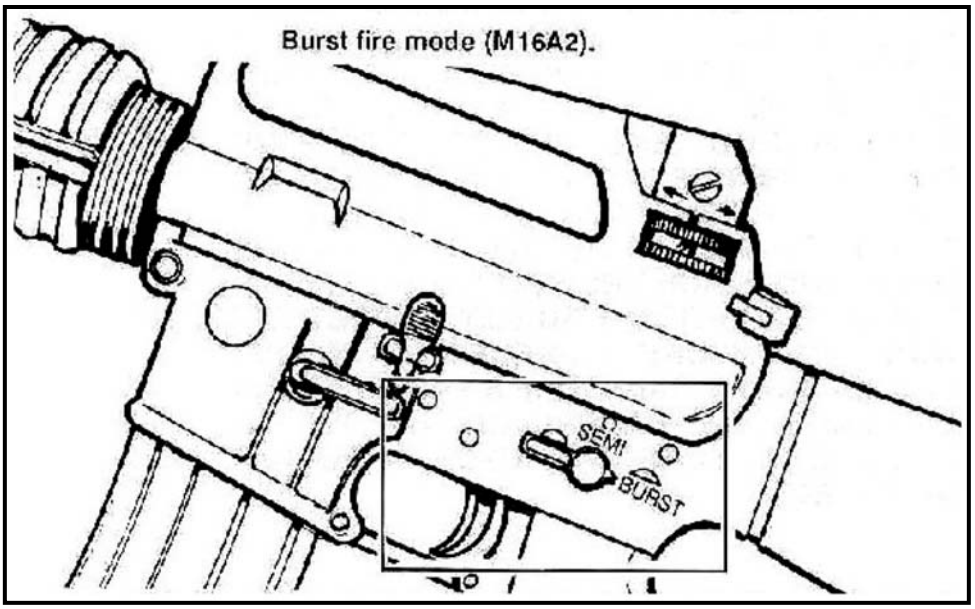


Figure 4-12. Burst fire mode.

4-4. PEER COACHING

Peer coaching is using two soldiers of equal firing proficiency and experience to assist (coach) each other during marksmanship training. Some problems exist with peer coaching. If the new soldier does not have adequate guidance, a "blind-leading-the-blind" situation results, which can lead to negative training and safety violations. However, when adequate instruction is provided, peer coaching can be helpful even in the IET environment. Since all soldiers in units have completed BRM, peer coaching should yield better results.

a. **Benefits.** The pairing of soldiers can enhance learning for both of them. The coach learns what to look for and what to check as he provides guidance to the firer. Communication between peers is different than communication between a soldier and drill sergeant or senior NCO. Peers have the chance to ask simple questions and to discuss areas that are not understood. Pairing soldiers who have demonstrated good firing proficiency with those who have firing problems can improve the performance of problem firers.

b. **Duties.** The peer coach assists the firer in obtaining a good position and in adjusting sandbags. He watches the firer not the target to see that the firer maintains a proper, relaxed, steady position; that he holds his breath before the final trigger squeeze; that he applies initial pressure to the trigger; and that no noticeable trigger jerk, flinch, eye blink, or other reaction can be observed in anticipation of the rifle firing. The peer coach can use a variety of training aids to assist in coaching the soldier. At other times, he could be required to observe the target area. For example, when field-fire targets are being engaged and the firer cannot see where he is missing targets. The peer coach can add to range safety procedures by helping safety personnel with preliminary rifle checks.

c. **Checklist for the Coach.** The procedures to determine and eliminate rifle and firer deficiencies follow.

(1) The coach checks to see that the—

- Rifle is cleared and defective parts have been replaced.
- Ammunition is clean, and the magazine is properly placed in the pouch.
- Sights are blackened and set correctly for long or short range.

(2) The coach observes the firer to see if he—

- Uses the correct position and properly applies the steady-position elements.
- Properly loads the rifle.
- Obtains the correct sight alignment (with the aid of an M16 sighting device).
- Holds his breath correctly (by watching his back at times).
- Applies proper trigger squeeze; determines whether he flinches or jerks by watching his head, shoulders, trigger finger, and firing hand and arm.
- Is tense and nervous. If the firer is nervous, the coach has the firer breath deeply several times to relax.

(3) Supervisory personnel and peer coaches correct errors as they are detected. If many common errors are observed, it is appropriate to call the group together for more discussion and demonstration of proper procedures and to provide feedback.

d. **Position of the Coach.** The coach constantly checks and assists the firer in applying marksmanship fundamentals during firing. He observes the firer's position and his application of the steady position elements. The coach is valuable in checking factors the firer is unable to observe for himself and in preventing the firer from repeating errors.

(1) During an exercise, the coach should be positioned where he can best observe the firer when he assumes position. He then moves to various points around the firer (sides and rear) to check the correctness of the firer's position. The coach requires the firer to make adjustments until the firer obtains a correct position.

(2) When the coach is satisfied with the firing position, he assumes a coaching position alongside the firer. The coach usually assumes a position like that of the firer (Figure 4-13), which is on the firing side of the firer.

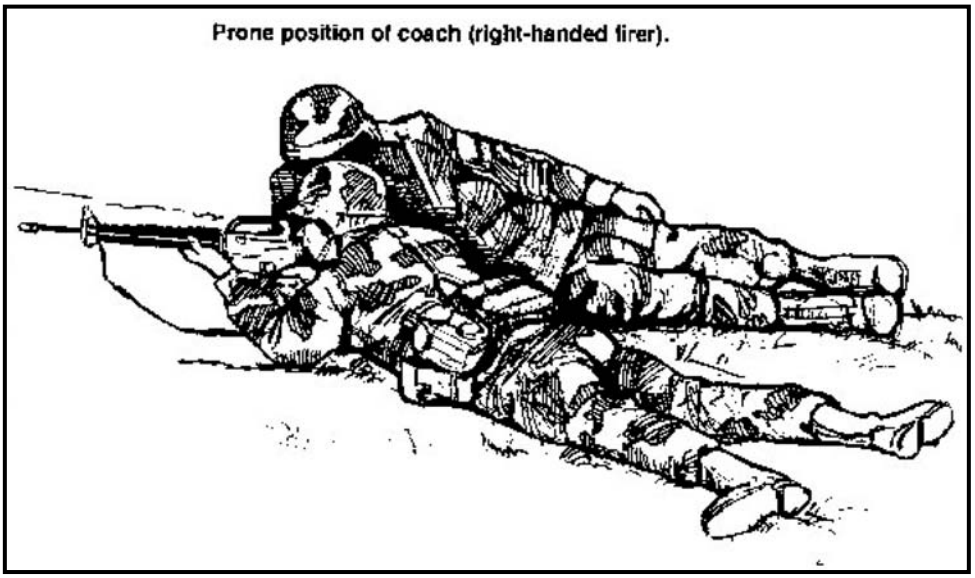


Figure 4-13. Prone position of coach (right-handed firer).

NOTE: Bending one knee is optional in this position (soldier's preference).

Section II. MARKSMANSHIP FUNDAMENTALS I

This training program (Figure 4-14) reinforces BRM and trains the four fundamentals through dry-firing to standard during circuit training. It teaches range and safety procedures.

Marksmanship Fundamentals I
Period 2 (8 hours)
Instructional Intent:
Reinforce BRM 1 and train the Four Fundamentals, with hands on training, through dry firing to standard during circuit training with an M16/M4 series weapon. Teach range and safety procedures.
Observables:
Live-fire range procedures replicated and enforced. (Per local SOP)
Equipment fitted properly to maximize training. (Per local SOP)
Ensure all dry firing is well-aimed fire using 25m zero targets.
Ensure peer coaching is being emphasized IAW this manual.
Ensure the four fundamentals are being integrated into all exercises IAW this manual.
Tasks:
The four fundamentals IAW with this manual.
Basic firing positions IAW with this manual.
Range and safety procedures IAW with local standard operating procedures.
Dominant eye training. IAW with this manual.
Demonstrate the integrated act of shooting during dry fire exercises.

M15A1 aiming card 6 consecutive alignments. (3 using side alignment and 3 using bottom up alignment.)
Target box and paddle exercise at 25 meters. (6 consecutive within a 2-cm circle)
Modified dime or washer exercise. (6 consecutive from prone and foxhole)

Notes: 1. Additional training aids are listed in Appendix A of this manual.
2. Soldiers who do not meet the standard will receive remedial training on the fundamentals of rifle marksmanship before subsequent instruction.

Figure 4-14. Marksmanship fundamentals I training program.

4-5. THE FOUR FUNDAMENTALS

The soldier must understand and apply the four key fundamentals before he approaches the firing line. He must establish a steady position allowing observation of the target. He must aim the rifle at the target by aligning the sight system, and fire the rifle without disturbing this alignment by improper breathing or during trigger squeeze. These skills are known collectively as the four fundamentals. Applying these four fundamentals rapidly and consistently is the integrated act of firing.

a. **Steady Position.** When the soldier approaches the firing line, he should assume a comfortable, steady firing position. The time and supervision each soldier has on the firing line are limited. He must learn how to establish a steady position during integrated act of dry-fire training (Figure 4-15, page 4-14). The firer is the best judge of the quality of his position. If he can hold the front sight post steady through the fall of the hammer, he has a good position. The steady position elements are as follows.

(1) ***Nonfiring Handgrip***. The rifle hand guard rests on the heel of the hand in the V formed by the thumb and fingers. The grip of the non-firing hand is light.

(2) ***Rifle Butt Position***. The butt of the rifle is placed in the pocket of the firing shoulder. This reduces the effect of recoil and helps ensure a steady position.

(3) ***Firing Handgrip***. The firing hand grasps the pistol grip so it fits the V formed by the thumb and forefinger. The forefinger is placed on the trigger so the lay of the rifle is not disturbed when the trigger is squeezed. A slight rearward pressure is exerted by the remaining three fingers to ensure that the butt of the stock remains in the pocket of the shoulder, minimizing the effect of recoil.

(4) ***Firing Elbow Placement.*** The firing elbow is important in providing balance. Its exact location depends on the firing/fighting position used. Placement should allow shoulders to remain level.

(5) ***Nonfiring Elbow***. The non-firing elbow is positioned firmly under the rifle to allow a comfortable and stable position. When the soldier engages a wide sector of fire, moving targets, and targets at various elevations, his non-firing elbow should remain free from support.

(6) ***Cheek-to-Stock Weld***. The stock weld should provide a natural line of sight through the center of the rear sight aperture to the front sight post and on to the target. The firer's neck should be relaxed, allowing his cheek to fall naturally onto the stock. Through dry-fire training, the soldier practices this position until he assumes the same cheek-to-stock weld each time he assumes a given position, which provides consistency in aiming. Proper eye relief is obtained when a soldier establishes a good cheek-to-stock weld. A small change in

eye relief normally occurs each time that the firer assumes a different firing position. The soldier should begin by trying to touch the charging handle with his nose when assuming a firing position. This will aid the soldier in maintaining the same cheek-to-stock weld hold each time the weapon is aimed. The soldier should be mindful of how the nose touches the charging handle and should be consistent when doing so. This should be critiqued and reinforced during dry-fire training.

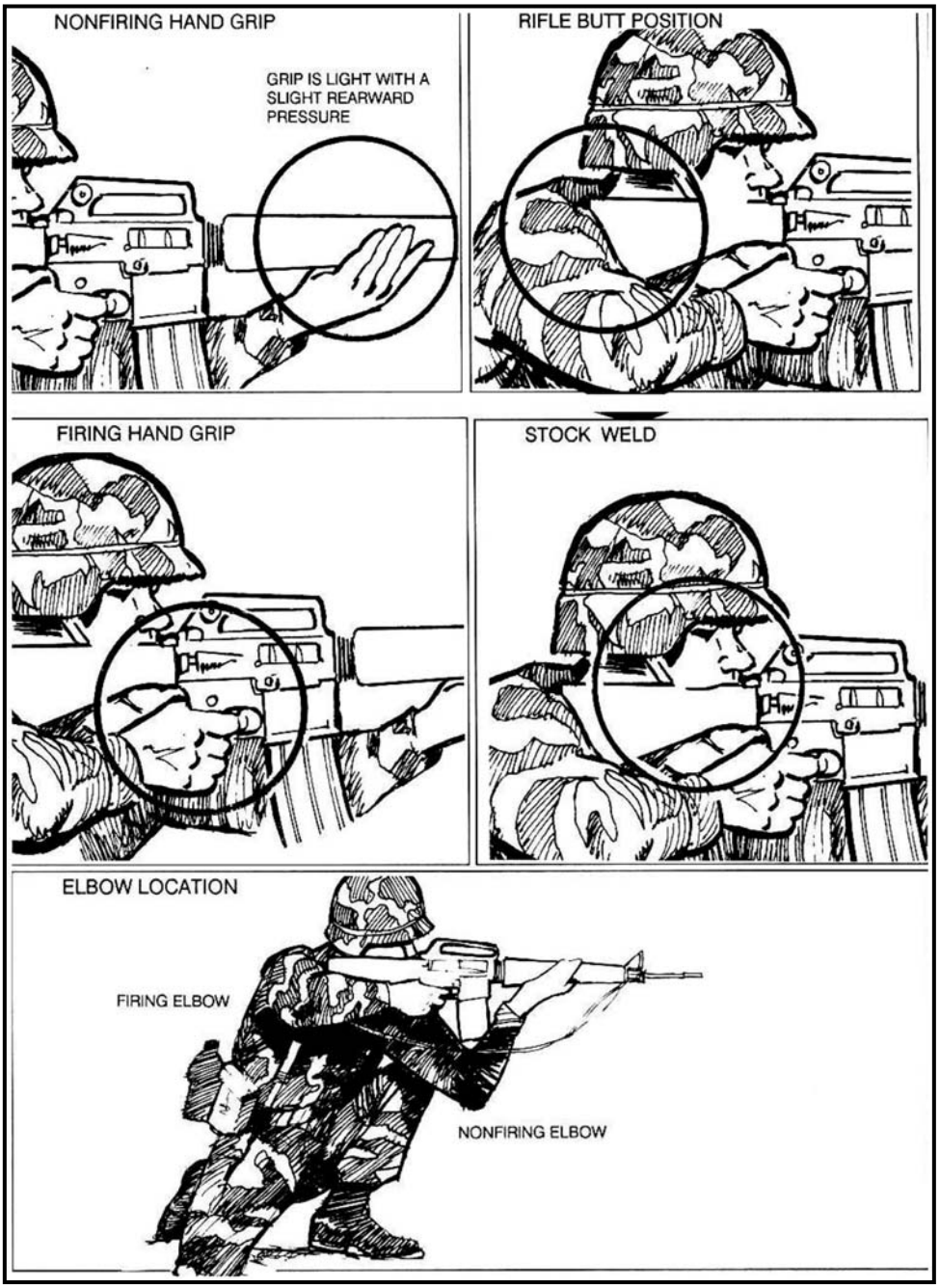


Figure 4-15. Steady position.

(7) ***Support.*** When artificial support (sandbags, logs, stumps) is available, it should be used to steady the position and support the rifle. If it is not available, then the bones, not the muscles, in the firer's upper body must support the rifle.

(8) ***Muscle Relaxation***. If support is used properly, the soldier should be able to relax most of his muscles. Using artificial support or bones in the upper body as support allows him to relax and settle into position. Using muscles to support the rifle can cause it to move due to muscle fatigue.

(9) ***Natural Point of Aim***. When the soldier first assumes his firing position, he orients his rifle in the general direction of his target. Then he adjusts his body to bring the rifle and sights exactly in line with the desired aiming point. When using proper support and consistent cheek to stock weld the soldier should have his rifle and sights aligned naturally on the target. When correct body-rifle-target alignment is achieved, the front sight post must be held on target, using muscular support and effort. As the rifle fires, muscles tend to relax, causing the front sight to move away from the target toward the natural point of aim. Adjusting this point to the desired point of aim eliminates this movement. When multiple target exposures are expected (or a sector of fire must be covered), the soldier adjusts his natural point of aim to the center of the expected target exposure area (or center of sector).

b. **Aiming.** Having mastered the task of holding the rifle steady, the soldier must align the rifle with the target in exactly the same way for each firing. The firer is the final judge as to where his eye is focused. The instructor or trainer emphasizes this point by having the firer focus on the target and then focus back on the front sight post. He checks the position of the firing eye to ensure it is in line with the rear sight aperture.

(1) ***Rifle Sight Alignment.*** Alignment of the rifle with the target is critical. It involves placing the tip of the front sight post in the center of the rear sight aperture (Figure 4-16). Any alignment error between the front and rear sights repeats itself for every 1/2 meter the bullet travels. For example, at the 25-meter line, any error in rifle alignment is multiplied 50 times. If the bullet is misaligned by 1/10 inch, it causes a target at 300 meters to be missed by 5 feet.

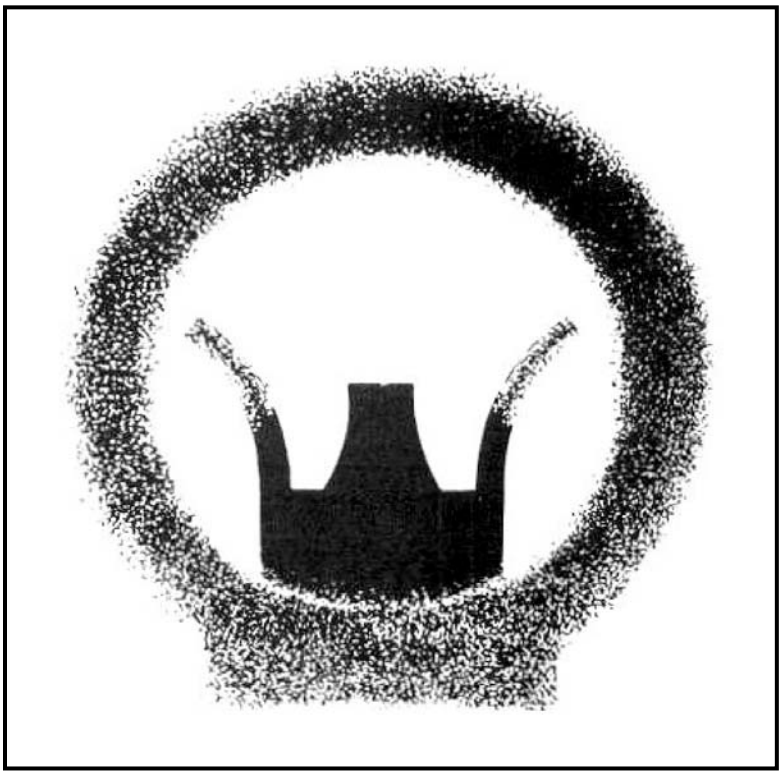


Figure 4-16. Correct sight alignment.

(2) ***Focus of the Eye.*** A proper firing position places the eye directly in line with the center of the rear sight aperture. When the eye is focused on the front sight post, the natural ability of the eye to center objects in a circle and to seek the point of greatest light (center of the aperture) aid in providing correct sight alignment. For the average soldier firing at combat-type targets, the natural ability of the eye can accurately align the sights. Therefore, the firer can place the tip of the front sight post on the aiming point, but the eye must be focused on the tip of the front sight post. This causes the target to appear blurry, while the front sight post is seen clearly. Two reasons for focusing on the front sight post are:

(a) Only a minor aiming error should occur since the error reflects only as much as the soldier fails to determine the target center. A greater aiming error can result if the front sight post is blurry due to focusing on the target or other objects.

(b) Focusing on the tip of the front sight post aids the firer in maintaining proper sight alignment (Figure 4-17).

(3) ***Sight Picture.*** Once the soldier can correctly align his sights, he can obtain a sight picture. A correct sight picture has the target, front sight post, and rear sight aligned. The sight picture includes two basic elements: sight alignment and placement of the aiming point.

(a) Placement of the aiming point varies, depending on the engagement range. For example, Figure 4-17 shows a silhouette at 300 meters where the aiming point is the center of mass, and the sights are aligned for a correct sight picture.

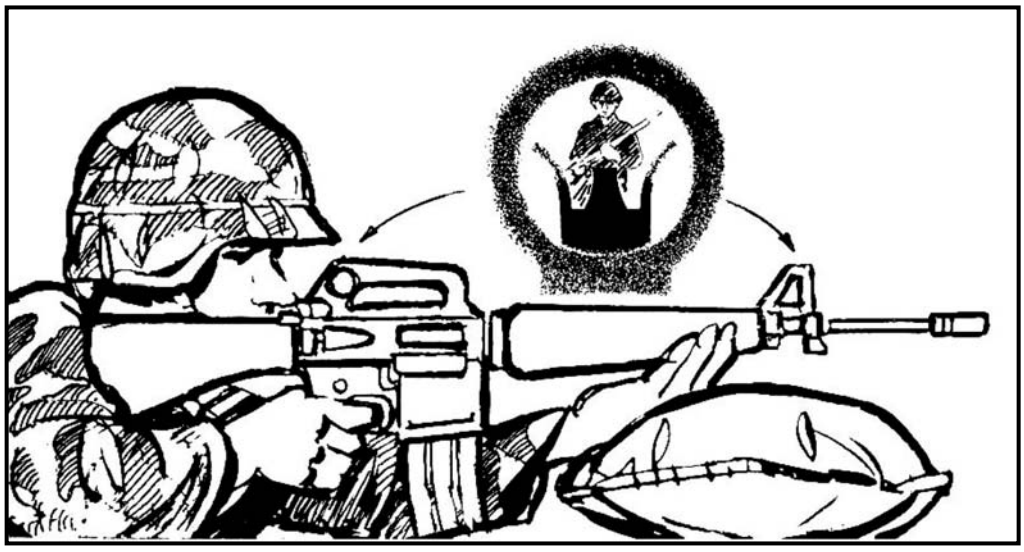


Figure 4-17. Correct sight picture.

(b) A technique to obtain a good sight picture is the side aiming technique (Figure 4-18). It involves positioning the front sight post to the side of the target in line with the vertical center of mass, keeping the sights aligned. The front sight post is moved horizontally until the target is directly centered on the front sight post.

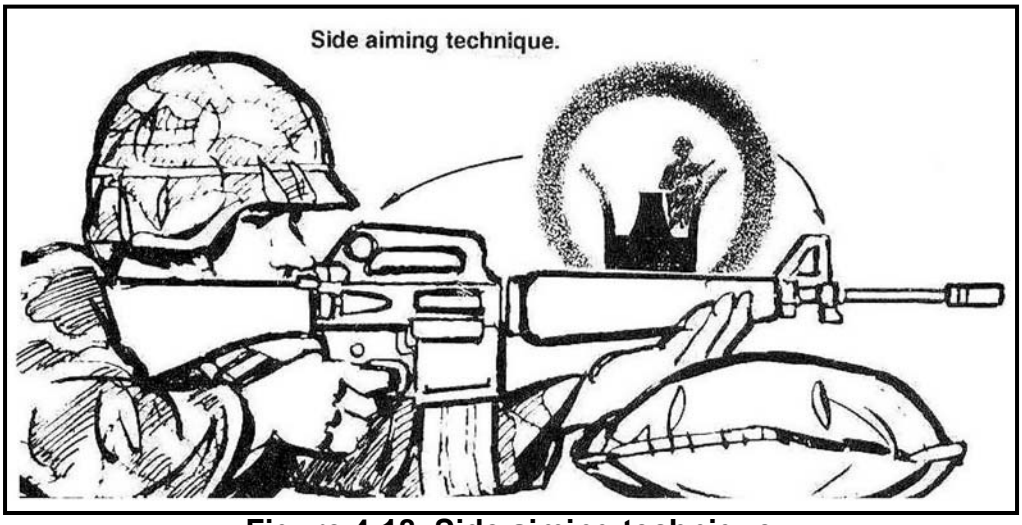
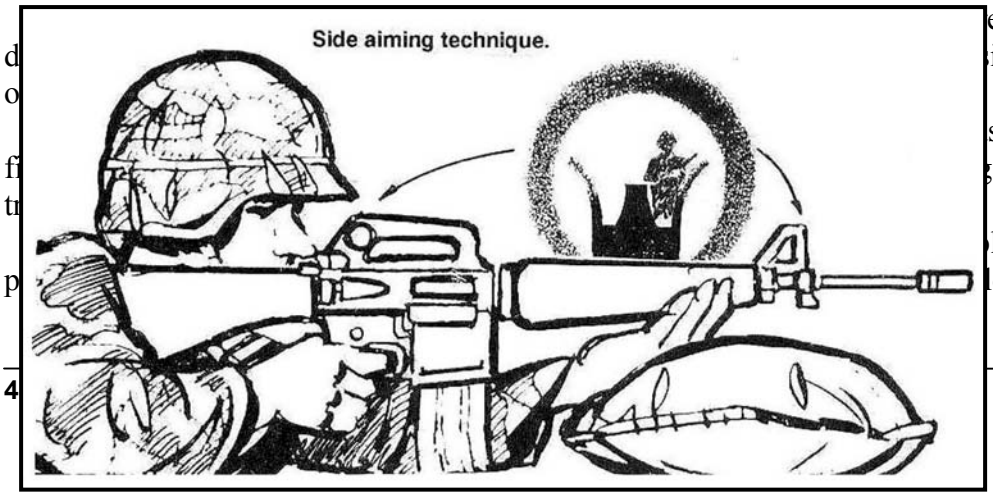


Figure 4-18. Side aiming technique.



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of breath control techniques are practiced during dry fire. The coach/trainer ensures that the firer uses two breathing techniques and understands them by instructing him to exaggerate his breathing. The firer must be aware of the rifle's movement (while sighted on a target) as a result of breathing.

(1) The first technique is used during zeroing (and when time is available to fire a shot) (Figure 4-19). There is a moment of natural respiratory pause while breathing when most of the air has been exhaled from the lungs and before inhaling. Breathing should stop after most of the air has been exhaled during the normal breathing cycle. The shot must be fired before the soldier feels any discomfort.

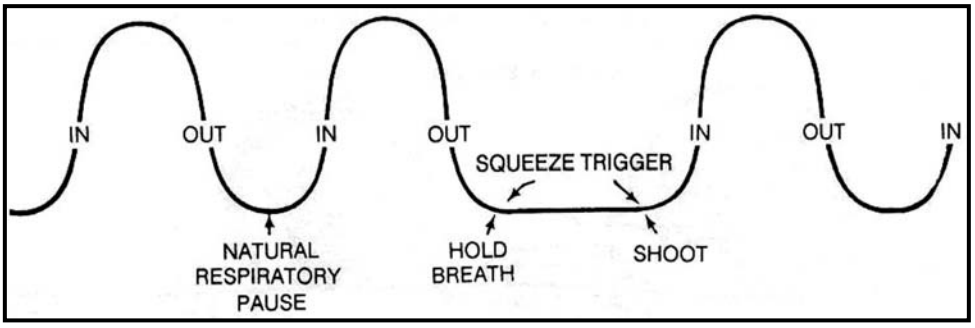

Figure 4-19. Breath control for engaging single targets.

(2) The second breath control technique is employed during rapid fire (short-exposure targets) (Figure 4-20). Using this technique, the soldier stops his breath when he is about to squeeze the trigger.

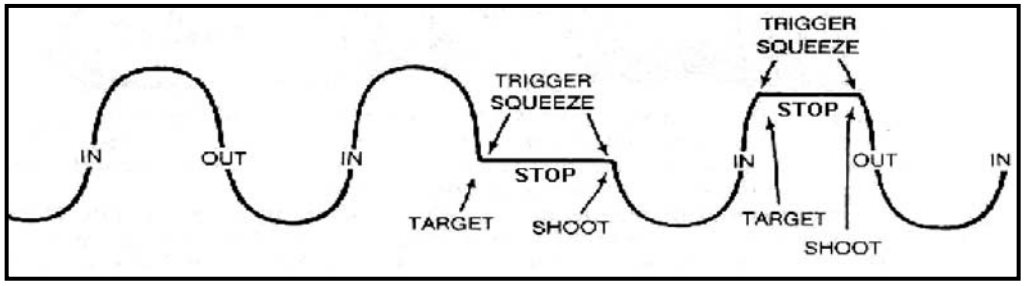

Figure 4-20. Breath control while engagement of short-exposure targets.

d. **Trigger Squeeze.** A novice firer can learn to place the rifle in a steady position and to correctly aim at the target if he follows the basic principles. If the trigger is not properly squeezed, the rifle will be misaligned with the target at the moment of firing.

(1) ***Rifle Movement.*** Trigger squeeze is important for two reasons: First, any sudden movement of the finger on the trigger can disturb the lay of the rifle and cause the shot to miss the target. Second, the precise instant of firing should be a surprise to the soldier. The soldier's natural reflex to compensate for the noise and slight punch in the shoulder can cause him to miss the target if he knows the exact instant the rifle will fire. The soldier usually tenses his shoulders when expecting the rifle to fire. It is difficult to detect since he

does not realize he is flinching. When the hammer drops on a dummy round and does not fire, the soldier's natural reflexes demonstrate that he is improperly squeezing the trigger.

(2) ***Trigger Finger***. The trigger finger (index finger on the firing hand) is placed on the trigger between the first joint and the tip of the finger (not the extreme end) and adjusted depending on hand size, grip, and so on. The trigger finger must squeeze the trigger to the rear so the hammer falls without disturbing the lay of the rifle. When a live round is fired, it is difficult to see what effect trigger pull had on the lay of the rifle. It is important to experiment with many finger positions during dry-fire training to ensure the hammer is falling with little disturbance to the aiming process.

(a) As the firer's skills increase with practice, he needs less time spent on trigger squeeze. Novice firers can take five seconds to perform an adequate trigger squeeze, but, as skills improve, he can squeeze the trigger in a second or less. The proper trigger squeeze should start with slight pressure on the trigger during the initial aiming process. The firer applies more pressure after the front sight post is steady on the target and he is holding his breath.

(b) The coach/trainer observes the trigger squeeze, emphasizes the correct procedure, and checks the firer's applied pressure. He places his finger on the trigger and has the firer squeeze the trigger by applying pressure to the coach/trainer's finger. The coach/trainer ensures that the firer squeezes straight to the rear on the trigger avoiding a left or right twisting movement. The coach/trainer observes that the firer follows through and holds the trigger to the rear for approximately one second after the round has been fired. A steady position reduces disturbance of the rifle during trigger squeeze.

(c) Wobble area is the movement of the front sight around the aiming point when the rifle is in the steadiest position. From an unsupported position, the firer experiences a greater wobble area than from a supported position. If the front sight strays from the target during the firing process, pressure on the trigger should be held constant and resumed as soon as sighting is corrected. The position must provide for the smallest possible wobble area. From a supported position, there should be minimal wobble area and little reason to detect movement. If movement of the rifle causes the front sight to leave the target, more practice is needed. The firer should never try to quickly squeeze the trigger while the sight is on the target. The best firing performance results when the trigger is squeezed continuously, and the rifle is fired without disturbing its lay.

4-6. FIRING POSITIONS

During preliminary marksmanship instruction only the basic firing positions are taught. The other positions are added later in training to support tactical conditions. The two firing positions used during initial training are the individual foxhole supported firing position and the basic prone unsupported firing position. Both offer a stable platform for firing the rifle. They are also the positions used during basic record fire.

a. **Individual Foxhole Supported Firing Position.** This position provides the most stable platform for engaging targets (Figure 4-21, page 4-20). Upon entering the position, the soldier adds or removes dirt, sandbags, or other supports to adjust for his height. He then faces the target, executes a half-face to his firing side, and leans forward until his chest is against the firing-hand corner of the position. He places the rifle hand guard in a V formed by the thumb and fingers of his nonfiring hand, and rests the nonfiring hand on the material (sandbags or berm) to the front of the position. The soldier places the butt of the weapon in

the pocket of his firing shoulder and rests his firing elbow on the ground outside the position. (When prepared positions are not available, the prone supported position can be substituted.) Once the individual supported fighting position has been mastered, the firer should practice various unsupported positions to obtain the smallest possible wobble area during final aiming and hammer fall. The coach-trainer can check the steadiness of the position by observing movement at the forward part of the rifle, by looking through the Ml6 sighting device, or by checking to see support is being used.

Figure 4-21. Individual foxhole supported firing position.

NOTE: The objective is to establish a steady position under various conditions. The ultimate performance of this task is combat. Although the firer must be positioned high enough to observe all targets, he must remain as low as possible to provide added protection from enemy fire.

b. **Basic Prone Unsupported Firing Position.** This firing position (Figure 4-22) offers another stable firing platform for engaging targets. To assume this position, the soldier faces his target, spreads his feet a comfortable distance apart, and drops to his knees. Using the butt of the rifle as a pivot, the firer rolls onto his nonfiring side, placing the nonfiring elbow close to the side of the magazine. He places the rifle butt in the pocket formed by the firing shoulder, grasps the pistol grip with his firing hand, and lowers the firing elbow to the ground. The rifle rests in the V formed by the thumb and fingers of the non-firing hand. The soldier adjusts the position of his firing elbow until his shoulders are about level, and pulls back firmly on the rifle with both hands. To complete the position, he obtains a stock weld and relaxes, keeping his heels close to the ground.

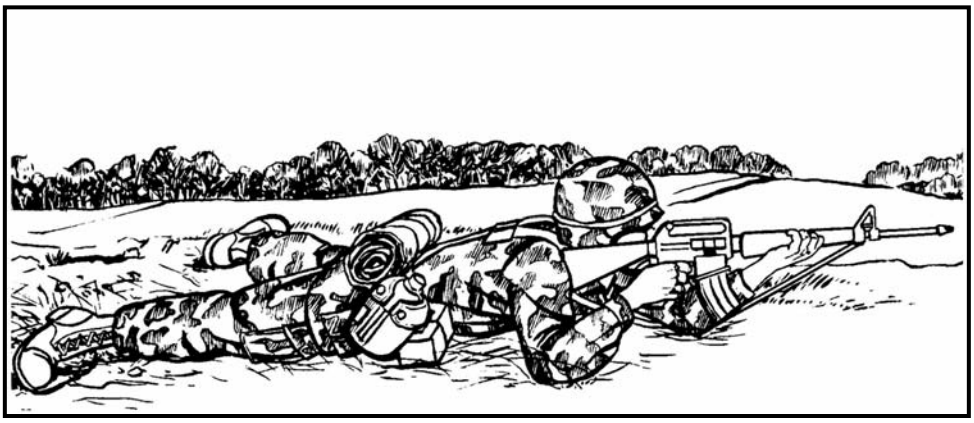

Figure 4-22. Basic prone unsupported firing position.

4-7. TRAINING DEVICES AND EXERCISES

Several marksmanship training devices are available to aid in sustainment training when used with the appropriate training strategies. They are beneficial when ammunition is limited for training or practice exercises. Some training devices are complex, costly, and in limited supply, while others are relatively simple, cheap, and in large supply. Devices and aids can be used alone or in combinations. Individuals or squads can sustain or practice basic marksmanship skills and fundamentals with devices and aids.

a. **Dominant Eye Training.** This exercise assists the coach and the firer in determining which eye the firer should use when engaging targets. The firer's dominant eye should be identified early in the training process to prevent unnecessary problems such as a blurred sight picture or the inability to acquire a tight shot group during the grouping exercise. (Refer to Appendix A for a detailed explanation on the dominant eye training exercise and training standards.)

b. **M15A1 Aiming Card.** This exercise measures the soldier's ability to acquire the same sight picture each time the firer places his sights on a target using iron sights (Refer to Appendix A for a detailed explanation on the M15A1 aiming card exercise and training standards.)

c. **Target Box and Paddle Exercise.** This exercise incorporates the soldier's position and breathing while aiming at a target 25 meters away, simulating a live fire 25-meter engagement. This exercise reinforces the basic fundamentals while refining the soldier's muscle memory during the integrated act of dry firing. This exercise specifically focuses on the soldier's position, breathing and sight picture. (Refer to Appendix A for a detailed explanation of the target box and paddle exercise and training standards.)

d. **Dime and Washer Exercise.** This exercise incorporates the soldier's position; breathing and trigger squeeze at a target 25 meters away, simulating a live fire 25-meter engagement. The soldier must successfully dry-fire his weapon six consecutive times without the washer falling to the ground. This exercise specifically focuses on all four of the soldier's fundamentals. (Refer to Appendix A for a detailed explanation of the Dime and washer exercise and training standards.)

Section III. MARKSMANSHIP FUNDAMENTALS II

This training program (Figure 4-23) reinforces BRM and the four fundamentals while demonstrating the integrated act of shooting on the Weaponeer.

Marksmanship Fundamentals II
Period 3 (8 hours)
Instructional Intent:
Reinforce BRM 1, 2 and the four fundamentals while demonstrating the integrated act of shooting on the Weaponeer.
Observables:
All fundamentals emphasized and applied on the Weaponeer.
Weapons safety reinforced on the Weaponeer.
Peer coaching is emphasized during Weaponeer firing.
Remediate all soldiers who fail to hit six out of nine shots at the 300-meter Weaponeer target.
Tasks:
Demonstrate the integrated act of firing while using the Weaponeer device.

Note: Soldiers who do not meet the standard will receive remedial training before subsequent instruction.

Figure 4-23. Marksmanship Fundamentals II training program.

4-8. WEAPONEER

The Weaponeer is capable of simulating all of the BRM live-fire scenarios without firing rounds. Immediate feedback is available for critiquing the soldier's application of the integrated act of firing while using the Weaponeer device to include misfire procedures. (Refer to Appendix A for a detailed explanation of the Weaponeer training procedures and training standards.) This exercise incorporates all four fundamentals while giving immediate downrange feedback.

4-9. ENGAGEMENT SKILLS TRAINER 2000

The engagement skills trainer (EST) 2000 is a portable firearms training simulator system that provides training of marksmanship, squad tactical, and close-range shoot-don't shoot techniques and skills for small arms weapons. Features that differentiate the EST 2000 from other systems are superior accuracy and state of the art graphics. (Refer to Appendix A for a detailed explanation of the EST 2000 training simulator.)